



MSFD *Motorized Smoke
Fire Damper*





Introduction

Prudent Aire's smoke damper defined as "a device installed in ducts and air transfer opening of an air distribution or smoke control system designed to resist the passage of air and smoke. Primary function to prevent the passage of smoke through the heating, ventilation, and air conditioning system, or from one side of a fire-rated separation to the other.

Smoke damper and their actuators shall be qualified in accordance with UL555S to an elevated temperature of 177°C & 250°C. Leakage rating - Class II

CONSTRUCTIONS & MATERIALS

- Leakage rating Class II
- Parallel blade closing action
- High pressure rating of up to 3kPa with Min leakage and deflections
- UL certified blade seal at blade edge to minimised leakage
- Shaft : 11.0mm Hexagon shaft
- Smoke damper and their actuators shall be qualified in accordance with UL555S

Casing



Galvanised Steel

Blade



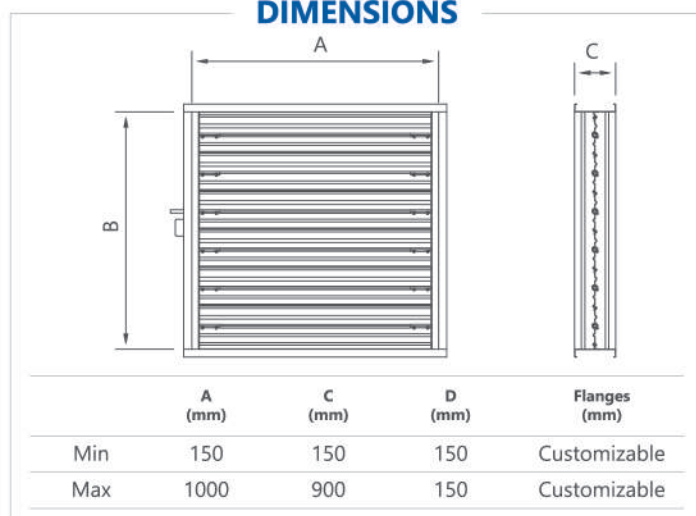
Galvanised Steel

Casing & Blade



Stainless Steel
(Available)

DIMENSIONS



FUNCTION DESCRIPTION

Operational

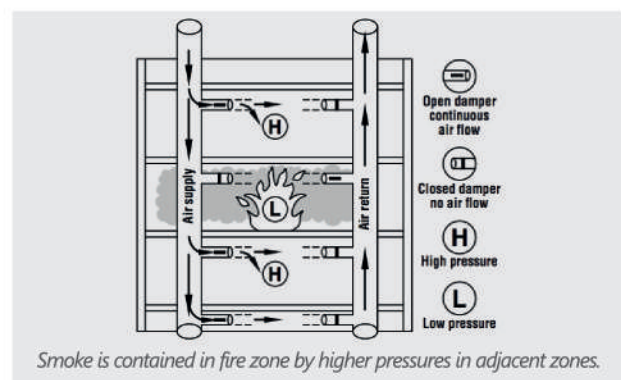
Either a factory-installed electric or a pneumatic actuator, they are ultimately controlled by smoke detectors and/or fire alarms. The smoke dampers serve two general applications of 'passive smoke control system' and 'engineered smoke control system'

As a part of the 'passive smoke control system', the dampers close upon detection of smoke and prevent the circulation of air and smoke through a duct, transfer, or ventilation opening.

As part of an 'engineered smoke control system' designed to control smoke migration using walls and floors as barriers to create pressure differences. Pressurizing the areas surrounding the fire results in prevention of smoke spread into other areas.

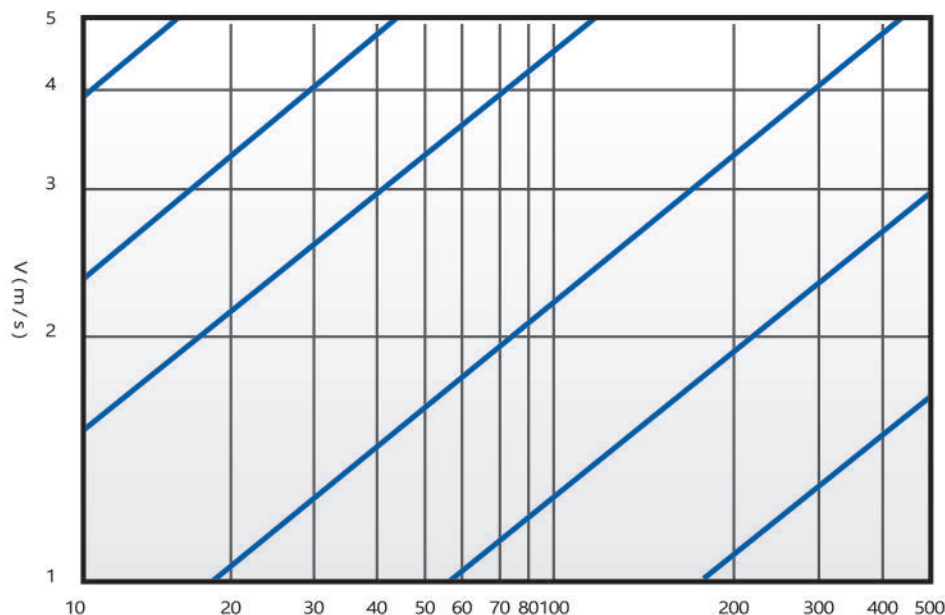
Damper Blade Design

Damper blade designed to optimize allowable width, thus minimizing the required number of obstructing blade per damper and yet maintain the structural integrity with minimum deflections under high pressure differential of up to 3 kPa. UL certified blade seal are installed at blade edge to provide a much better air-tight conditions in a closed position.



AERODYNAMIC PERFORMANCE

Pressure Drop VS Duct Velocity



CONSTRUCTION & MATERIALS SPECS

Casing Assembly

- 1.5mm thickness casing sections. Casing sections to be welded externally with welding beads to be ground flush. A 1.5mm materials thickness center million to be provided for larger dimensions of damper. Fire retardant sealant to be applied to the casing joints to minimize possible smoke leakage. if any.
- Material provided to be galvanized steel, unless otherwise stated.

Damper Blade Assembly

- 1.5mm thickness single skin configuration. The individual blade to be in triple v-grooves design, complete with UL certified rubber blade seal to minimised leakage. Blade operation to be of parallel blade action with linkage system that ensures fail-safe closing action to form the required smoke barrier. Opposed blade action configuration to be available upon request. 9.5mm galvanised steel shaft to be provided for each blade section.
- Mechanical bushing to be tight-fitted into the casing channel sections of the casing assembly to support and maintain the blade shafts in the pre-determined locations.
- Material provided to be galvanized steel, unless otherwise stated.

Linkage Assembly

- 15.0mm x 3.0mm thick linkage system to be welded to the driving blade shaft. Individual linkage components to be secured with pins or welding method at pre-determined geometry locations to ensure accurate blade phasing.

Linkage Cover & Side Seals

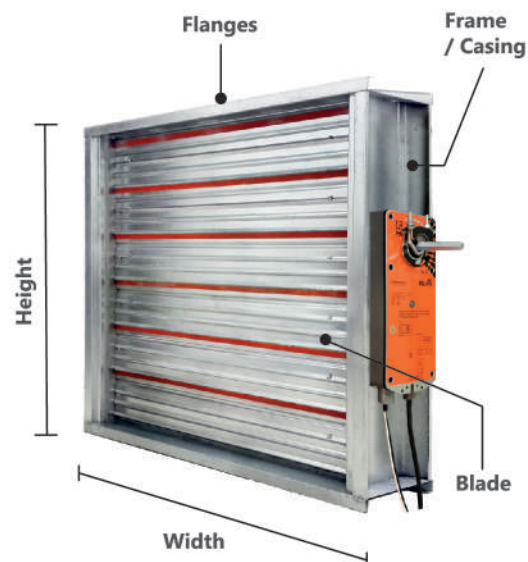
- 1.5mm pre-formed angles to be welded to the damper casing assembly to provide both blade stop and sealing fuctions.
- Actuator mounting angles to be provided when required to ensure proper actuator mounting. Construction design to be changed according to actuator type.
- Material provided to be galvanized steel, unless otherwise stated.

Finishing

- Damper assembly to be in natural finish of the material.

Performance

- Dampers shall be classified as Smoke Damper in accordance with the latest version of UL555S. The leakage rating in accordance with UL555s shall be Leakage Class II or above.
- In-house testing demonstration to be provided by the manufacturer upon request.
- Our smoke damper tested in UL certified laboratory in USA.



Notice :

Damper size would be fabricate as exact neck size

No. Fail: JBPM/IP/RNP:700-7/2/4-53 (7)
(PEMBAHARUAN: KEDUA)

SIJIL PEPASANGAN KESELAMATAN KEBAKARAN

APPROVAL CERTIFICATE



Jabatan Bomba dan Penyelamat Malaysia
dengan ini memperakukan
Fire and Rescue Department of Malaysia
hereby certify



FIRE DAMPER
MSFD-MULTIBLADE SMOKE FIRE DAMPER W/O SLEEVE
4 JAM TANPA INSULASI (MODEL: 'PRUDENTAIRE')

Berdasarkan Piawaian
Complying with

BS 476: PART 20: 1987 & UL 555s

Syarikat Berdaftar
Registered company

PRUDENTAIRE ENGINEERING SDN. BHD (657301-P)
Lot 2102, Jalan KPB 12, Off Jalan Suria Park,
Kampung Baru Balakong,
43300 Seri Kembangan,
Selangor Darul Ehsan.

Tempoh sah perakuan: **03/09/2019 hingga 02/09/2020**


(DATO' YUSOF BIN SIDEK)

Pengarah
Bahagian Perancangan dan Penyelidikan,
b.p. Ketua Pengarah
Jabatan Bomba dan Penyelamat Malaysia.

Tarikh: **2 Ogos 2019**

*** Peringatan:**

Sila patuhi sepenuhnya syarat-syarat dan had kegunaan seperti dalam Lampiran A1



MSFD | Motorized Smoke Fire Damper



Products Range

Grilles	
Diffusers	
Dampers	
Fire & Smoke Protection	
VAV	
Others	
Accessories	



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